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**BEFORE THE ARIZONA CORPORATION COMMISSION**

TOM FORESE  
CHAIRMAN

BOB BURNS  
COMMISSIONER

DOUG LITTLE  
COMMISSIONER

ANDY TOBIN  
COMMISSIONER

BOYD DUNN  
COMMISSIONER

**IN THE MATTER OF THE  
APPLICATION OF ARIZONA PUBLIC  
SERVICE COMPANY FOR A  
HEARING TO DETERMINE THE FAIR  
VALUE OF THE UTILITY PROPERTY  
OF THE COMPANY FOR  
RATEMAKING PURPOSES, TO FIX A  
JUST AND REASONABLE RATE OF  
RETURN THEREON, TO APPROVE  
RATE SCHEDULES DESIGNED TO  
DEVELOP SUCH RETURN.**

**DOCKET NO. E-01345A-16-0036**


**DOCKET NO. E-01345A-16-0123**

**IN THE MATTER OF FUEL AND  
PURCHASED POWER  
PROCUREMENT AUDITS FOR  
ARIZONA PUBLIC SERVICE  
COMPANY.**

**ENERGY FREEDOM COALITION  
OF AMERICA'S NOTICE OF FILING  
DIRECT TESTIMONY OF JAMES A.  
HEIDELL IN SUPPORT OF  
SETTLEMENT AGREEMENT**

Energy Freedom Coalition of America ("EFCA") hereby provides notice of filing the  
Direct Testimony of James A. Heidell in the above referenced matter.

Respectfully submitted this 3<sup>rd</sup> day of April, 2017.

  
\_\_\_\_\_  
Court S. Rich

Attorney for Energy Freedom Coalition of America

**Original and 13 copies filed on  
this 3<sup>rd</sup> day of April, 2017 with:**

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*I hereby certify that I have this day served a copy of the foregoing document on all parties of  
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5 **Docket No. E-01345A-16-0036 & E-01345A-16-0123**

6  
7 PREFILED TESTIMONY

8 OF

9 JAMES A. HEIDELL

10  
11 IN SUPPORT OF SETTLEMENT AGREEMENT

12  
13 On Behalf of

14 ENERGY FREEDOM COALITION OF AMERICA

15  
16 April 3, 2017  
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1                   **I.     Introduction and Purpose of Testimony**

2

3   **Q.     Would you please state your name, affiliation, and address?**

4   A.     My name is James A. Heidell. I am a Director at PA Consulting Group. My  
5           business address is 1700 Lincoln Street, Suite 1550, Denver, CO 80203.

6

7   **Q.     On whose behalf are you filing this testimony?**

8   A.     I am filing this testimony on behalf of Energy Freedom Coalition of America.

9

10   **Q.     Are you the same James A. Heidell with pre-filed testimony in the early phase**  
11           **of this case?**

12   A.     Yes.

13

14   **Q.     What is the purpose of your testimony?**

15   A.     The purpose of my testimony is to support the March 27, 2017 Settlement  
16           Agreement (“Settlement”) and to explain why I have concluded that the provisions  
17           related to the residential rate design and treatment of rooftop solar customers is in  
18           the public interest.

19

20                   **II.     Summary of Testimony**

21

22   **Q.     Would you please provide a summary of the findings in your testimony that**  
23           **support your conclusion that the Settlement’s proposed residential rate**  
24           **design and treatment of rooftop solar customers is in the public interest?**

25   A.     Yes, based upon my review of the Settlement and associated documents I  
26           conclude the following:

27         **1.     APS’ Residential Rate Design is reasonable:**

- i. The Settlement eliminates the requirement for new solar customers to be on demand rates. There are a number of conditions and qualifications as to which customers can be on the different residential rates that are available to those with and without distributed energy generation. However, in the long-term all but the small load residential customers and new solar customers will be on either demand, or time-of-use (“TOU”) rates. The settlement preserves customer choice, offers rates that provide incentives to efficiently use electricity, and provides a reasonable opportunity for APS to recover its costs.
- ii. The settlement does not unduly increase the monthly customer charge for standard service customers and does not create a disincentive for a customer to switch to a TOU rate schedule.

**2. Treatment of Existing Rooftop Solar Customers is fair:**

- i. The settlement preserves the grand-fathering of customers with existing rooftop solar systems under the current net metering tariff and, by grandfathering the customers’ rate design as well, preserves the economics that customers thought they would be subject to when they made long term investments in distributed generation.
- ii. The settlement cut-off date for grand-fathered solar installations provides a reasonable window for those customers actively pursuing solar to finish the process. New residential installations that apply for interconnection after the effective date of new rates will go on the new TOU rate.

**3. Treatment of New Rooftop Solar Customers provides options:**

- i. The settlement provides for new rooftop solar customers to choose between either a TOU, or a demand rate. Allowing new solar customers to go on the settlement TOU rate should allow rooftop solar to be economically viable, at least in the short term.



1           ii. Continuation of rooftop solar and its associated benefits is in the public  
2           interest because it diversifies the energy supply, provides customers  
3           choices in how they meet their energy needs, and supports the Arizona  
4           economy.

5       **4. The Export Rate for compensating non-grandfathered customers is**  
6       **reasonable:**

- 7           i. The \$0.1209/kWh export rate is a reasonable settlement value as it  
8           includes both the Company's initial estimate of the value of distributed  
9           solar energy exports to the grid, an additional \$0.02/kWh for avoided  
10          transmission and distribution capacity costs, and a component for  
11          avoided line losses. While the parties did not agree on a calculation  
12          methodology to determine an appropriate avoided transmission and  
13          distribution costs for future Resource Comparison Proxy (RCP)  
14          calculations, the adjustment indicates that the parties acknowledge that  
15          distributed solar does provide value to those components of the system.  
16          Recognition that distributed solar provides transmission and distribution  
17          capacity benefits is in the public interest as it encourages least cost  
18          resource development.
- 19          ii. The Settlement provides reasonable size limits for customer installations  
20          to qualify for the RCP export rate.

21  
22       **III. Residential Rate Design for Non-Solar Customers**

23  
24       **Q. Have you reviewed the Settlement proposal regarding the rate options for**  
25       **residential non-solar customers?**

26       A. Yes, and I believe the Settlement is reasonable for the following reasons: 1) the  
27       Settlement does not require residential customers to be on demand rates; 2) the  
28       Settlement does not create an excessive increase in the Basic Service Charge for



1 standard service customers; and 3) the decrease in the customer charge for TOU  
2 customers removes a disincentive to switch to time of use rates. After May 1,  
3 2018 new customers who use over 1,000 kWh / month will only have the option to  
4 take service under the TOU, demand rates, or pilot rates (subject to the pilot rate  
5 qualifications.)

6  
7 **Q. Are the rate design and options for non-solar customers reasonable and in the**  
8 **public interest?**

9 A. Yes. Existing residential customers are not required to move on to demand rates  
10 and will continue to have the option to choose between non-TOU rates, TOU  
11 rates, or rates with demand charges. There is a sufficient delay before  
12 implementation so that new customers can continue to be educated about the TOU  
13 and demand rate options that they will have after May 1, 2018. The transition to  
14 TOU rates is reasonable as TOU rates provide price signals about the time of day  
15 when electricity costs are higher, allowing customers to make informed and  
16 efficient decisions about their electricity consumption patterns.

17  
18 **IV. Residential Rate Design for Rooftop Solar Customers**  
19

20 **Q. What rate options will be available for new residential rooftop solar**  
21 **customers who submit applications for interconnection after the effective date**  
22 **of the new rates?**

23 A. New solar customers will be eligible for the TOU rates, demand rates, or R-Tech  
24 pilot rates. They will be ineligible for the non-TOU energy only rates (R-Basic,  
25 R-Basic Large, and R-XS). The TOU and demand rates (TOU-E, R-2, and R-3)  
26 will all have a basic service charge of \$13 per month. The TOU peak period will  
27 be from 3:00 pm – 8:00 pm on weekdays and the winter TOU-E rate will have a  
28 winter supper off-peak period of 10:00 am – 3:00 pm on weekdays.

1  
2 **Q. Is it reasonable and in the public interest to limit the rate options for**  
3 **residential rooftop solar customers compared to residential customers**  
4 **without rooftop solar?**

5 A. While I do not endorse: i) separating the solar customers into a different rate  
6 class, ii) creating unique rates for solar customers, or iii) the definitions of the  
7 super off-peak and peak-periods, I find what was done in this case to be acceptable  
8 in the context of this settlement agreement. In my initial rate design testimony  
9 filed in this case, I opposed the APS proposal requiring all new residential rooftop  
10 solar customers to be required to take service on demand rates and only have a  
11 limited number of rate options. However, I support the concept of TOU rates as  
12 an efficient pricing mechanism.

13  
14 **Q. Is a TOU rate a reasonable rate structure for residential rooftop solar**  
15 **customers?**

16 A. Yes, customers who are deciding whether to install rooftop solar will be making a  
17 complex investment decision. As part of that decision they should also have the  
18 ability to evaluate and understand the TOU rates assuming that APS provides  
19 appropriate customer education.

20  
21 **V. Export Rate for New Rooftop Solar Customers**

22  
23 **Q. How will non-grandfathered rooftop solar customers be compensated for**  
24 **electricity exports?**

25 A. All exported electricity will be compensated at \$0.129/kWh in the first year of the  
26 rate. This rate is based upon the Resource Comparison Proxy (RCP) methodology  
27 and includes an allowance of \$0.02/kWh for transmission and distribution capacity  
28 savings as well as loss reductions. The rate was agreed to for settlement purposes

1 only and does not set any precedent. The rate is set for ten years for customers  
2 who sign up in the first year and will be adjusted each year for new customers  
3 installing rooftop solar. The adjustment is subject to a maximum reduction in  
4 compensation of 10% per year.

5  
6 **Q. Is it your opinion that the export rate is just, reasonable, and in the public**  
7 **interest?**

8 A. Yes. While it is my opinion that the value of the electricity exported is potentially  
9 higher than the export rate and that customers should have more certainty  
10 regarding the compensation for exported electricity, the rate is a reasonable  
11 compromise, does not over-compensate rooftop solar customers, and hence does  
12 not harm non-participants.

13  
14 **VI. Storage Pilot Rate Program (R-Tech)**

15  
16 **Q. Would you briefly describe the R-Tech Pilot Rate Program?**

17 A. Yes, the R-Tech Pilot rate is designed to test customer owned electricity storage.  
18 The pilot has relatively high summer (\$20.25 / kW) and winter (\$14.25 / kW)  
19 demand charges and relatively low energy charges. The pilot is initially available  
20 to 10,000 customers; however, if more than 6,000 customers sign up before the  
21 next rate case, the Settlement calls for APS to convene a meeting to discuss the  
22 future of the pilot program. If parties cannot reach agreement on the future of the  
23 pilot, then at the 7,000 customer participation level APS will file an evaluation  
24 report with the Commission and seek a Commission order regarding the future of  
25 the pilot.

1 **Q. Is the proposed rate structure with a monthly demand charge the ideal way to**  
2 **encourage the adoption of battery storage technologies?**

3 A. No, the rate structure that I proposed with a daily demand charge would be a better  
4 approach. However, it is my understanding that the current APS billing cannot  
5 accommodate a daily day demand charge structure. It is also my understanding  
6 that the new APS billing system targeted for 2018 may be able to accommodate a  
7 daily demand structure. Therefore, I recommend that a daily demand charge  
8 associated with customer owned storage be considered in the next rate case.  
9

10 **Q. How does the rate encourage customers to reduce demand?**

11 A. The relatively high demand charges give customers an economic incentive to  
12 manage their peak monthly demands. The pilot will require that customers either  
13 have already made, or will make investments in technologies to control demand.  
14 The required investments eliminate the potential free-rider problem of customers  
15 with low demands participating in the rate without making investments into  
16 technologies to manage demand.  
17

18 **Q. Is the rate limited to a single technology for controlling demand?**

19 A. No, customers can participate in the rate if they have two of the following  
20 technologies: rooftop solar, chemical storage systems (including batteries),  
21 electric vehicles, or a combination of two approved demand controlled  
22 technologies.  
23

24 **Q. What is the purpose of the evaluation point associated with the pilot when**  
25 **participation reaches 6,000 customers?**

26 A. The evaluation point allows the interested parties and the Commission to review  
27 the pilot before the maximum number of customers participate. This should allow  
28 for a smooth transition to a redesigned pilot, to a permanent rate, or potentially to

1 the termination of the pilot. This process should give the public and the  
2 Commission adequate time to review the pilot results and avoid potential future  
3 dissatisfaction associated with potential sudden changes in rules.  
4

5 **Q. Does this conclude your testimony?**

6 **A. Yes.**  
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